

Comparisons of Job Characteristics

Focus Occupation: **Chemists (19-2031)**

Associated Occupation: **Forensic Science Technicians (19-4092)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 66

Focus Occupation: Chemists (19-2031)

Associated Occupation: Forensic Science Technicians (19-4092)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Chemistry	4.8	13.1	21.8	>>	Current knowledge level is likely more than sufficient
Clerical	7.3	12.9	11.6	<	Expanded education and/or training may be required
Law and Government	5.9	12.9	6.1	<<	Extensive education and/or training may be required
Public Safety and Security	6.9	12.0	5.7	<<	Extensive education and/or training may be required
Biology	3.7	9.3	6.8	<<	Extensive education and/or training may be required
Medicine and Dentistry	3.7	6.0	2.6	<<	Extensive education and/or training may be required
Geography	3.9	5.7	2.4	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Chemists (19-2031)

Associated Occupation: Forensic Science Technicians (19-4092)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Critical Thinking	10.8	14.1	12.5	<	A higher skill level may be required
Speaking	10.8	13.6	11.2	<	A higher skill level may be required
Writing	9.2	13.5	13.0	0	Current skill level may be sufficient
Complex Problem Solving	9.1	12.6	12.3	0	Current skill level may be sufficient

Active Learning	8.7	11.2	11.4	0	Current skill level may be sufficient
Instructing	7.8	10.6	10.3	0	Current skill level may be sufficient
Science	4.5	9.8	17.3	>>	Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 89			
Focus Occupation: Chemists (19-2031)					
Associated Occupation: Forensic Science Technicians (19-4092)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Flexibility of Closure	7.8	16.0	10.7	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.1	13.6	<	Some improvement in abilities may be required
Near Vision	11.1	15.1	13.5	<	Some improvement in abilities may be required
Problem Sensitivity	11.1	14.4	12.9	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	14.3	13.8	0	Current ability level may be sufficient
Information Ordering	9.9	12.9	12.8	0	Current ability level may be sufficient
Far Vision	7.8	12.5	8.2	<<	Extensive improvement in abilities may be required
Category Flexibility	9.0	12.0	13.6	>	Current ability level is likely sufficient
Speed of Closure	5.9	11.2	7.3	<<	Extensive improvement in abilities may be required
Perceptual Speed	7.4	11.1	8.6	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 84
Focus Occupation: Chemists (19-2031) Associated Occupation: Forensic Science Technicians (19-4092)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Advise governmental or industrial personnel	28	
Analyze chemical experimental, test, or analysis data or findings	69	
Analyze scientific research data or investigative findings	27	
Classify plants, animals, or other natural phenomena	69	
Collect scientific or technical data	30	
Communicate technical information	4	

Conduct analyses or tests of organic compounds	71
Conduct laboratory research or experiments	57
Conduct standardized qualitative laboratory analyses	62
Conduct standardized quantitative laboratory analyses	62
Confer with engineering, technical or manufacturing personnel	25
Confer with scientists	54
Develop or maintain databases	30
Develop tables depicting data	33
Explain complex mathematical information	30
Maintain records, reports, or files	5
Make decisions	24
Operate industrial or nondestructive testing equipment	84
Prepare reports	8
Prepare technical reports or related documentation	22
Record test results, test procedures, or inspection data	48
Understand properties of gases or liquids	78
Use chemical testing or analysis procedures	54
Use computers to enter, access or retrieve data	3
Use government regulations	44
Use hazardous materials information	35
Use interpersonal communication techniques	10
Use knowledge of investigation techniques	16
Use knowledge of metric system	39
Use laboratory equipment	60
Use mathematical or statistical methods to identify or analyze problems	30
Use oral or written communication techniques	1
Use physical science research techniques	68
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 53

Focus Occupation: Chemists (19-2031)
Associated Occupation: Forensic Science Technicians (19-4092)

Tools and Technologies	Exclusivity
Cameras	2
Computers	1
Content authoring and editing software	1
Data management and query software	1

Indicating and recording instruments	2
Industry specific software	1
Laboratory centrifuges and accessories	13
Laboratory heating and drying equipment	13
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory washing and cleaning equipment	35
Light and wave generating and measuring equipment	4
Network applications software	1
Respiratory protection	6
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.